

## ABSTRACT OF THE DISCLOSURE

The invention relates to a method and system for individually exercising one or more parameters of hand movement such as range, speed, fractionation and strength in a virtual reality environment and for providing performance-based interaction with the user to increase user motivation while exercising. The present invention can be used for rehabilitation of neuromotor disorders, such as a stroke. A first input device senses position of digits of the hand of the user while the user is performing an exercise by interacting with a virtual image. A second input device provides force feedback to the user and measures position of the digits of the hand while the user is performing an exercise by interacting with a virtual image. The virtual images are updated based on targets determined for the user's performance in order to provide harder or easier exercises.